of synovial fluid viscosity in the knee. These features in turn contribute to increased friction between the articulating surfaces of the knee and hence generate vibration during motion. This vibration is detectable using non invasive techniques described above and can be analyzed to assess the quality of the knee joint and to detect and discriminate development of osteoarthritis in patients.

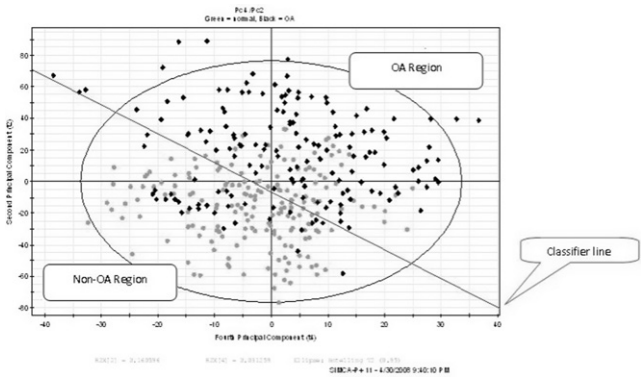

Figure 2. Principal Component Analysis Scatter Plot used for classifying normal and suspected OA patients

292 EROSIVE VERSUS NON EROSIVE HAND OA: PROSPECTIVE CROSS-SECTIONAL COMPARISON OF CLINICAL DATA

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Purpose: Erosive Hand OA (HOA) has been described. Whether it is a specific entity or a step during the pathologic process remains controversial. However, few works have studied the clinical presentation of patients.
Our objective was to compare clinical features in erosive versus non erosive HOA patients.
Methods: This was a prospective cross-sectional study. Successive outpatients visiting at the Hand OA consultation centre of St-Antoine hospital have been examined according to a standardized case report form. Postero-anterior radiographs of both hands on a single film were taken. Erosive HOA was defined by the presence of at least 2 joints exhibiting erosive radiographic features as described by Verbruggen [1]. *Data collected:* demographics; personal and familial medical history; HOA history; clinical and radiological description, including nodes, pain VAS, pain on joint pressure, function assessed by the Functional Index for Hand Arthropathies (FIHOA), aesthetic damage (100 mm VAS), quality of life by the SF12, psychological impact of the disease by the Hamilton Anxiety Depression scale (HAD), number of radiologically affected joints and number of joints with erosions. *Statistics:* mean [standard deviation (sd)]; Fisher or Kruskall tests for comparisons.
Results: 101 patients were described, radiographic data recorded for 88 patients: 90% women, 10% men, mean age 63.8 (8.7), BMI 23.4 (3.4), 4 with a personal, 5 a familial history of psoriasis, 63% with a familial history of HOA, mean symptoms duration 10 (7.5) years. 8 had diabetes and 20 hypothyroidy. 38 patients were classified as erosive and 50 as non erosive. Demographic data were similar in both groups. ESR and CRP levels were similar in both groups (14.7 mm vs 13.6 and 3.7 vs 4.3 respectively). Comparisons of clinical data between both erosive and non erosive HOA appear in the table:

Table 1:

Clinical data	Erosive HOA (n = 38)	Non erosive HOA (n = 50)	P
Night awakening (% yes)	32%	32%	1.00
Morning stiffness (Yes)	54%	54%	1.00
Duration (mn)	17.5	17.5	0.65
Pain at rest (VAS, mm)	19.0 (17.2)	22.1 (22.6)	0.68
Pain on move (VAS, mm)	52.7 (22.7)	45.5 (25.6)	*0.18*
Aesthetic damage (VAS, mm)	57.5 (38.1)	32.9 (34.5)	**0.005**
Global disease assessment (VAS, mm)	46.6 (25.4)	38 (28.9)	*0.15*
FIHOA (0–30)	10.2 (5.7)	6.7 (5.7)	**0.005**
SF 12 MCS (0–100)	47.7 (9.7)	47.6 (9.2)	0.97
SF 12 PCS (0–100)	40.4 (7.5)	43.6 (8.8)	*0.12*
SF 12 total (0–100)	44.0 (6.5)	45.6 (7.4)	0.40
HAD total (0–21)	6.9 (2.9)	6.2 (3.3)	0.26

Conclusions: This study shows that almost 43% of patients visiting for HOA can be classified as erosive HOA. Inflammation or pain at rest were not higher in erosive HOA. Erosive HOA patients reported more aesthetic damage and functional impairment.

References

[1] 1. Verbruggen G, Veys EM. Numerical scoring systems for the anatomic evolution of osteoarthritis of the finger joints. Arthritis Rheum 1996;39: 308–20.

293 CLINICAL AND RADIOLOGICAL FINDINGS IN HAND OSTEOARTHRITIS

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Purpose: To investigate clinical and radiographic features of hand osteoarthritis (HOA) and to compare them in the erosive and non-erosive subsets of disease.
Methods: We enrolled 360 outpatients with symptomatic HOA; 199 with erosive HOA (EHOA) and 161 with non-EHOA. 307 age- and sex-matched subjects without clinical signs of HOA were enrolled as normal controls (NC). Anteroposterior radiographs of both hands were obtained from all HOA patients. Demographic (age, age of disease onset, sex), clinical (enlarged and/or tender joint assessment of trapeziometacarpal, proximal – PIP – and distal – DIP – interphalangeal joints; symptomatic knee or hip osteoarthritis; body max index – BMI; familial history of HOA; comorbidities) and radiological (Kallman's score) data were recorded and analyzed. Student's T and Chi squared test were used to compare quantitative and qualitative variables, respectively.
Results: In HOA patients hip and knee involvement was more frequent than in NC (hip OA: 9.5% vs 2.3%, p = 0.001; knee OA: 19.9% vs 11.4%, p = 0.008). Ischemic heart disease (4.5% vs 1.6%, p = 0.044), thyroiditis (6.2% vs 1.6%, p = 0.003), and hypercholesterolaemia (23.3% vs 13.7%, p = 0.002) were more frequently observed in HOA patients. Significant differences between EHOA and non-EHOA are reported in the table. BMI values, prevalence of symptomatic hip or knee OA, tobacco smoking, HOA family history, and comorbidities were similar in the two subsets.
Conclusions: HOA is frequently associated with OA in other joints and it shows higher prevalence of hypercholesterolaemia and ischemic heart disease and which deserves further confirmation from a larger series of patients. Since the significant differences between EHOA and non-EHOA are mainly related to disease severity (number of joints involved, Kallman's grading) we suggest EHOA is a more severe stage of disease and not a distinct nosographic entity.

Differences between EHOA and non-EHOA patients

	EHOA	non-EHOA	p
Age (yrs), mean±sd	68.2±7.9	66.5±8.8	0.05
Age at onset (yrs), mean±sd	53.5±9.5	56.3±9.9	0.01
Joint involvement (n), mean±sd	10.4±4.4	8.1±4.3	<0.0001
Kallman's score, mean±sd	96.3±22.7	68.9±18.6	<0.0001

294 AESTHETIC ASSESSMENT IN HAND OA AND ITS POSSIBLE DETERMINANTS

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Purpose: Aesthetic damage is one of the major complaints of hand OA (HOA) patients in consultation, especially, women, but no clinical work has been performed assessing this major issue. No tool up to now has been developed to evaluate this outcome.
Objective: To evaluate self-perceived aesthetic damage in HOA patients and its possible determinants.
Methods: This was a prospective cross-sectional study. Successive outpatients visiting at the Hand OA consultation centre of St-Antoine hospital have been examined according to a standardized case report form. Postero-anterior radiographs of both hands on a single film were performed. *Data collected:* Patients were asked to score their perceived aesthetic damage on a 100-mm visual analog scale (VAS). Other data recorded were demographics, personal and familial medical history, HOA history, clinical and radiological description, including nodes, pain (VAS), pain on joint pressure, function assessed by the Functional Index for Hand